

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-23. (Cancelled).

24. (New) A method for manufacturing a nitride semiconductor light emitting device, the nitride semiconductor light emitting device including:

- an n-type cladding layer made of an n-type nitride semiconductor;
- a p-type cladding layer made of a p-type nitride semiconductor; and
- an active layer provided between the n-type and p-type cladding layers, being made of an nitride semiconductor containing In;

the method comprising steps of:

forming a first p-type nitride semiconductor layer made of $\text{Al}_a\text{Ga}_{1-a}\text{N}$ ($0 < a < 1$) using metal organic chemical vapor deposition with nitrogen atmosphere, after formation of the active layer;

forming a second p-type nitride semiconductor layer made of $\text{Al}_b\text{Ga}_{1-b}\text{N}$ ($0 < b < 1$) using metal organic chemical vapor deposition with hydrogen atmosphere, after formation of the first p-type nitride semiconductor layer; and

forming the p-type cladding layer, after formation of the second p-type nitride semiconductor layer.

25. (New) The method according to claim 24, further comprising a step of:

forming the active layer using metal organic chemical vapor deposition with the

same atmosphere as that for the first p-type nitride semiconductor layer.

26. (New) The method according to claim 24, further comprising a step of:

forming a p-type guide layer between the second p-type nitride semiconductor layer and the p-type cladding layer.

27. (New) The method according to claim 24, wherein a total thickness of the first and second p-type nitride semiconductor layers is set in a range from 10 to 1000 Å inclusive.

28. (New) The method according to claim 24, wherein a total thickness of the first and second p-type nitride semiconductor layers is set in a range from 20 to 400 Å inclusive.

29. (New) The method according to claim 24, wherein a thickness of the first p-type nitride semiconductor layer is set in a range from 10 to 100 Å inclusive.

30. (New) The method according to claim 24, wherein a thickness of the second p-type nitride semiconductor layer is set in a range from 10 to 300 Å inclusive.

31. (New) The method according to claim 24, wherein an Al mixture ratio (a) of the first p-type nitride semiconductor layer is set in a range from 0.1 to 0.5 inclusive.

32. (New) The method according to claim 24, wherein an Al mixture ratio (a) of the first p-type nitride semiconductor layer is set in a range from 0.1 to 0.35 inclusive.

33. (New) The method according to claim 24, wherein an Al mixture ratio (b) of the second p-type nitride semiconductor layer is set in a range from 0.1 to 0.5 inclusive.

34. (New) The method according to claim 24, wherein an Al mixture ratio (b) of

the second p-type nitride semiconductor layer is set in a range from 0.1 to 0.35 inclusive.

35. (New) The method according to claim 24, wherein the p-type cladding layer is made of $\text{Al}_x\text{Ga}_{1-x}\text{N}$ ($0 < x < 1$), whose Al ratio (x) satisfies both $x \leq a$ and $x \leq b$.

36. (New) The method according to claim 26, further comprising steps of:

forming a p-type contact layer, after formation of the p-type cladding layer; and

forming a stripe-shaped ridge waveguide by etching an upper portion above the active layer from the p-type contact layer side so that the p-type guide layer has a protruding portion, after formation of the p-type contact layer.

37. (New) The method according to claim 36, further comprising a step of:

forming an insulating film on an etched surface of the p-type guide layer.

38. (New) The method according to claim 24, further comprising steps of:

forming a p-type contact layer, after formation of the p-type cladding layer; and

forming a stripe-shaped ridge waveguide by etching an upper portion above the active layer from the p-type contact layer side so that the p-type cladding layer has a protruding portion, after formation of the p-type contact layer.

39. (New) The method according to claim 38, further comprising a step of:

forming an insulating film on an etched surface of the p-type cladding layer.

40. (New) The method according to claim 26, further comprising a step of:

forming the p-type guide layer by diffusion of Mg included in the first p-type nitride semiconductor layer into an undoped layer.

41. (New) The method according to claim 24, wherein the p-type cladding layer

has a super lattice structure formed by laminating GaN and AlGa_N.

42. (New) The method according to claim 24, wherein the active layer has a quantum well structure including a well layer made of In_cGa_{1-c}N ($0 \leq c < 1$).

43. (New) The method according to claim 42, wherein the active layer has a single quantum well structure formed by laminating a well layer and a barrier layer made of AlInGa_N.

44. (New) The method according to claim 42, wherein the active layer has a multi quantum well structure formed by laminating a well layer and a barrier layer made of AlInGa_N.

45. (New) The method according to claim 43, wherein the active layer has a middle layer made of Al_uGa_{1-u}N ($0 \leq u \leq 1$) on the well layer.

46. (New) The method according to claim 44, wherein the active layer has a middle layer made of Al_uGa_{1-u}N ($0 \leq u \leq 1$) on the well layer.